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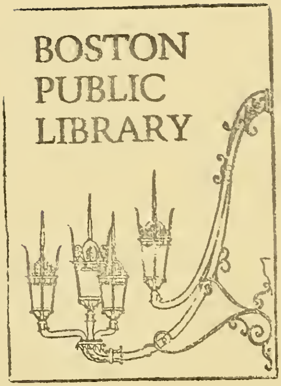

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BOSTON URBAN WILDS

A Natural Area Conservation Program

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The natural areas of Boston's famed park system are one of the city's greatest resources, offering its residents the opportunity to enjoy woodlands, beaches and marshland in the midst of a busy urban setting.

These public green spaces are an irreplaceable part of Boston's natural heritage. Unfortunately, however, our open space has diminished as the city has grown. The time has come to protect the natural areas that are privately held, so that they can also contribute to the quality and diversity of the city's open space inventory, now and in the future.

The Boston Urban Wilds study addresses natural area conservation creatively and thoroughly. It is an important first step toward ensuring that Boston will continue to meet the open space needs of its citizens and to maintain a pleasant environment in which to live.

Kevin H. White

Kevin H. White, Mayor
City of Boston

> **"The land that is still to be saved will have to be saved in the next few years. We have no luxury of choice. We must make our commitment now and look to this landscape as the last one. For us, it will be."**
>
> **William H. Whyte**
> ***The Last Landscape***

Within Boston's boundaries are over 2,000 acres of natural land that lie outside the city's park system. These "Urban Wilds" are a valuable, even irreplaceable resource for the city and its residents; they afford great beauty, provide environmental and recreational amenities, and often are critical to the ecological balance of their surroundings.

The Urban Wilds have an uncertain future, however, because they are held by a variety of private owners and are unprotected by any land-use regulations that specifically recognize their value as natural areas.

The Boston Urban Wilds study, undertaken by the Boston Redevelopment Authority under a grant from the National Endowment for the Arts, has a two-fold urpose: first, to inventory all of Boston's unprotected natural areas in order to alyse their use and importance and develop a strategy for their protection; and ond, to increase public awareness of the nature of Boston in order to generate pport for Urban Wilds preservation efforts. (To achieve the latter, the BRA has ublished a poster/guide to nearly 50 natural areas within the city's park system.)

This report presents the background, findings and recommendations of the Urban Wilds study. It sets forth a program of policies and actions to be pursued by he City of Boston, through the various departments and agencies that make land-use decisions, which will preserve the Urban Wilds sites.

Unless we begin to act now, many of these scenic natural areas may indeed be our "last landscape." And we and future generations of Bostonians will be much he poorer without them.

Robert T Kenney

Robert T. Kenney, *Director*
Boston Redevelopment Authority

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INTRODUCTION

When people outside of Boston think of that city, they conjure up images of an old and historic place, where among the newer developments one can still trace the origins of the American Revolution. For Bostonians, however, while Boston is all this, it is also much more. It is, for them, the neighborhoods in which they live, where they know the people, the streets, the houses, the shops and the parks. Yet, it is also those unprotected natural areas of remarkable beauty remaining hidden amongst the development—Boston's Urban Wilds—areas which represent a historical picture of Boston much older than the Revolution.

For developers, the Urban Wilds are "undeveloped or vacant lands," places still awaiting the inevitable bulldozer. In fact, the number of these sites diminishes each year as more and more of them become developed. For Boston residents, however, these sites represent the memory of where one played as a child, where one's children play today, and where one looks for beauty, fresh air and green spaces.

In many instances, these areas have remained in their natural state not out of appreciation for their special characteristics, but because these very attributes—such as wetlands and rock outcroppings—have made the sites less desirable for development. Yet, as demands become greater, more of the sites are lost to development each year. Clearly, if any of these beautiful bits of Boston's natural landscape are to remain, the *laissez-faire* policies of the past must be changed. In order to guarantee a natural heritage for future generations, a more concerted effort at natural area protection must be made.

The Boston Urban Wilds study provides a program for just such an effort on the part of the City of Boston. The following is a summary of the information contained in this study.

As a result of its geological history and topography, Boston has a wide variety of Urban Wilds, ranging from distinctive hilltops to saltmarshes, from rock outcroppings to inland wetlands, from glacial ponds to woodlands. These Urban Wilds frequently perform important functions in the environment: for instance, the wetlands store storm water to help prevent flooding in low areas and also provide feeding and breeding grounds for fish and wildlife. Yet, many sites are valuable quite simply because they are scenic and can help create pleasant surroundings for residents and visitors, and also because they have potential for recreational uses such as hiking, picnicking or birdwatching.

Many sections of Boston are fortunate to have a diversity of Urban Wilds areas; these neighborhoods include East Boston, Charlestown, Dorchester and Mattapan, Allston-Brighton, Mission Hill/Jamaica Plain, Roxbury, and the area of historic Roxbury that now encompasses West Roxbury, Hyde Park, Roslindale and southern Jamaica Plain.

In these neighborhoods, 143 Urban Wilds sites—totaling 2,000 acres—have been identified, described in detail, and ranked as to their environmental significance and in relation to the open space needs that have been determined for each neighborhood. This, the first step in the Urban Wilds study, has been done in order to establish a priority system for protecting and preserving them. The likelihood of a site's development is also figured into the priority system, indicating a need for immediate action in some instances.

Next, tools that are available or could be created either to protect the Urban Wilds sites from destruction, or to find ways to minimize the impact of development on the natural area were catalogued. These include the transfer of local and State-owned land to the appropriate conservation or land management body (such as the Boston Conservation Commission or the Metropolitan District Commission); conservation restrictions agreed to by the private owners of natural areas, with an accompanying tax incentive; various land-use regulations now available under the Boston Zoning Code and Massachusetts General Laws; gifts of land by private owners to the City; purchase of land by the City; and the use of eminent domain powers where appropriate.

The most important single action that can be taken is to make both City administrators and Boston residents aware of the opportunities and resources provided by Urban Wilds sites and of the need to take steps to guarantee their future.

Based on the tools available and the current ownership patterns of the Urban Wilds sites, the following recommendations are made in the study:

- The City should acquire the 8 natural areas designated as "Most Significant" and in high open space need neighborhoods.
- The Boston Redevelopment Authority in its capacity as planning commission for the City should recommend Planned Development Area (PDA) designation for the 17 Urban Wilds sites threatened by development.
- The 33 Urban Wilds sites now owned by City agencies and departments such as the Boston Redevelopment Authority and the Real Property Department should be transferred immediately to the Boston Conservation Commission in perpetuity for conservation and recreation purposes.
- The City should begin to negotiate conservation restrictions with the private owners of Urban Wilds sites, which comprise nearly half the total 143 sites.
- Gifts of land to the City through the Boston Conservation Commission should be encouraged.
- Boston should consider adopting "Special Natural Area" zoning, similar to that in effect in New York City, which requires the review of private development proposals for their impact on natural areas before a building permit is issued.

The most important single action that can be taken, however, is to make both City administrators and Boston residents aware of the opportunities and resources provided by Urban Wilds sites and of the need to take steps to guarantee their future.

1

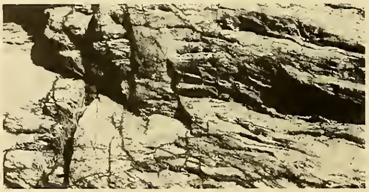
THE NATURE OF BOSTON

THE NATURE OF BOSTON

Boston is built on the broad plain, or lowland, which lies within a bowl-like rim of hills that curves from the North Shore, inland to Framingham, and around to the South Shore. Because of its shape, geologists refer to this area as the Boston Basin. Particularly to the north and south, this rim can be seen from some of Boston's numerous hilltops, which rise from the floor of the basin, some to a height as much as 360 feet above sea level. Three rivers — the Mystic, the Charles and the Neponset — originate outside the basin but flow through it and empty into Boston Harbor.

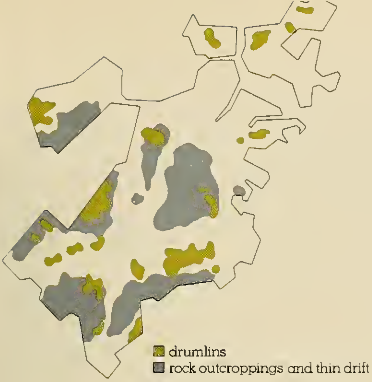
The geological and hydrological conditions of both the Urban Wilds sites and the other natural and man-made features found in Boston can best be understood by looking at the geological history of the Boston Basin. This history is, in fact, a composite of interacting forces that have brought changes to the land, the waters in and around it, and the vegetation that grows there.

The Land — The origins of the Boston Basin can be traced back 600 million years. From the earliest time until about one million years ago, the earth's crust underwent a series of dramatic changes: the land rose and was eroded down repeatedly; the sea invaded several times to cover the lowland and then receded as the land began to rise; the earth's surface was folded and compressed into valleys and hills. Earthquakes occurred, generating faults throughout the area, and volcanic activity intruded molten material which hardened within the surrounding rock. Evidence of this variety of geologic activities can be seen today in Boston's rock outcroppings. For example, the granite outcroppings found in Brighton were formed from molten material intruded within the earth's crust, while the sedimentary rock of Dorchester is composed of eroded material which was redeposited and compacted to form new rock.



Boston's current topography is primarily the result of the Ice Age which spread glaciers across New England 50,000 years ago. At the beginning of the Ice Age, the advancing ice scraped and

Glacial boulder at Dana Road, West Roxbury



broke the bedrock beneath, creating smoothly polished hills, boulders and much smaller rock fragments under its massive weight.

As temperatures rose and the glacier receded, it left in its wake a landscape dominated by ice and water-deposited materials; hills such as Beacon Hill were formed from rock fragments and sand which were gathered up by the swiftly moving melting water and deposited when the water's velocity decreased.

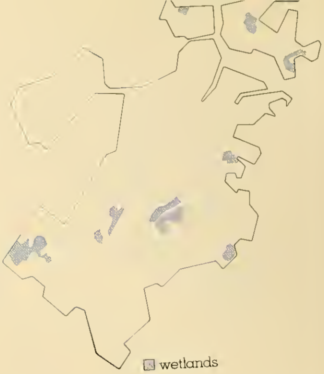
The melting glacier revealed the land form beneath. The most dramatic feature was the streamlined hills or "drumlins" which were formed when the mounds of sand and gravel that had accumulated under the glacier were smoothed into oblong hills by its weight alone. Drumlins are found throughout the city and in Boston Harbor, although wave action has eroded some of those in the harbor.

Although millions of years of geologic processes laid the foundation for the structure of the Boston area, human activity over the last three centuries has reworked the landscape greatly. Indeed, no other city has extended and changed its land form as frequently as Boston in order to create more land for an expanding population and economy.

By far the most significant change has been the transformation of the Boston Harbor coastline. At one time, three narrow-necked peninsulas – the Shawmut (downtown Boston), Charlestown and South Boston – and the five islands that now form East Boston, dominated the harbor. But wharves and causeways were built into and across the water for shipping purposes and to provide access among settled areas. Later, fill was deposited on coastal wetlands and in the harbor to enlarge and connect the peninsulas and islands.

To accomplish these changes, sand and gravel have been taken from many drumlins, moraines and kames in the Boston area, thereby altering its topography still more severely. Fort Hill, located on the Boston peninsula near the present South Station, was completely leveled and used as fill to create land in Boston Harbor, while the streets of Back Bay rest on gravel brought by railroad from Needham. In many instances throughout the city, additional land was created through infill of inland wetlands and ponds.

Orient Heights, East Boston



On the other hand, however, where some natural areas were destroyed to create more land, others were added. The Chestnut Hill Reservoir — a man-made pond — was built to supply Boston's water. Part of Mother Brook in Hyde Park is an artificial canal created to connect the Charles River with the Neponset. Sometimes this land reclamation was not done intentionally: the marsh adjacent to Logan Airport is a prime example of a new wetland formation, where landfill produced a sediment trap which then initiated new marsh growth.

The Wetlands — Wetlands, both coastal and inland, play a vital role in nature. Depending upon the surrounding environmental conditions, they can be an important factor in flood control and the maintenance of water supply. Wetlands offer food and shelter to migratory birds and upland mammals and create recreational and educational opportunities. In the last one hundred years alone, however, an estimated 6,000 acres of coastal wetlands within the inner portion of Boston Harbor have been destroyed. In this same amount of time, over half of the city's inland wetlands have been lost. Consequently, a swamp or marsh is a rare and valuable resource for Boston today.

A freshwater wetland forms in a poorly drained area where the soil is saturated or covered by water for several months of the year; it often develops as the later stages of pond or lake evolution or "succession." Over many years, a pond or lake becomes increasingly shallow as sediments accumulate on the bottom. As this occurs, the vegetation around the body of water is able to spread inward; it changes in character until the pond or lake disappears, leaving dry land that is interspersed with a newly developed drainage system.

Increased water runoff flowing into an already poorly drained area can also lead to the formation of a freshwater wetland. The marsh or swamp that develops corresponds to one of the later stages of pond or lake succession. Six categories of freshwater wetlands have been identified within the City of Boston: seasonally flooded basins or flats, fresh meadows, shallow fresh marshes, deep fresh marshes, shrub swamps and wooded swamps.

Coastal or saltwater wetlands occur where land

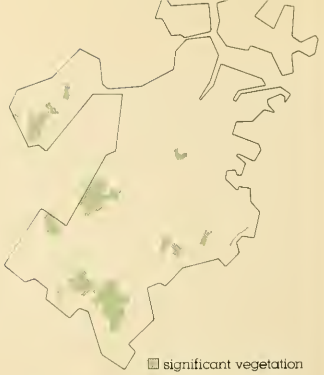
Freshwater wetland, Sawmill Brook, West Roxbury

is encroached upon by tidal waters. The land may be flooded daily by the tide, or only during storms. The salt-tolerant plants that take root in these areas provide habitats for over 250 animal species, and are also vitally important because they form the ecological niche in which the food chain begins. The Urban Wilds study has identified three types of saltwater wetlands in Boston: tidal salt marshes, irregularly flooded salt meadows and ditched salt meadows.

Vegetation — The vegetation found in unprotected natural areas is dramatically different from that found by the early settlers of Boston. In the 17th century, the Boston Basin was completely forested except along certain sections of the coastline where salt marshes existed and in bogs and swamps not yet firm enough to sustain trees.

As Boston grew, the land and vegetation were radically altered. The virgin forests were logged in order to provide timber for house and ship building, fuel and cleared land for cultivation. Coastal saltwater marshes were diked, dredged and filled in order to create land for residential, industrial and commercial development. During the 19th

Oak trees and ferns at Hancock Woods, West Roxbury



and 20th centuries agricultural land gradually became residential; land which was not built upon or farmed slowly changed from abandoned cultivated fields to fields of pioneer shrubs and trees which eventually grew into new woodlands. Over the years, the remaining woodlands in Boston have progressed from "pioneer" species such as Aspen, Cherry, Ailanthus, Box Elder and Pine to species such as Maple, Yellow Birch, Hemlock, Spruce, Oak and Hickory. This succession takes place because the pioneer species are much better adapted to the bare soil conditions. Their presence changes the site conditions so that the more permanent species can thrive, preventing erosion of the soil and providing food and shelter for a variety of wildlife.

The stages of natural succession, with their particular vegetative characteristics, are best understood through illustration. There are many examples found in Boston. In the Sawmill Marsh in West Roxbury, for example, the vegetation of the dry upland areas consists of Oaks, Low and High-bush Blueberries, Witch Hazel and Bracken. In the low moist areas, Red Maple, Bittersweet, Willow, Alder, Swamp Azalea and ferns are found. On the grounds of Roxbury Latin School, an abandoned cultivated field has grown into a woodland where White Pine, Elm, Ash, Birch, Shagbark Hickory, Black Locust, and Service-berry can be observed. On disturbed sites along the Neponset River, Quaking Aspens, Willows and Sumac grow profusely. In "the Ledge" on Parker Hill grow many kinds of trees including the Tree of Heaven and Sycamore Maples, Black Locusts, Oaks, Poplars and Ashes. Pin Oaks, Gray Birches and even occasional ferns grow out of the crevices in the cliffs. On the rim above the cliffs are a few Black Cherries and a Red Maple or two, and a large, rather flat field covered with many different kinds of wildflowers and grasses.

This, then, is the natural history of Boston — why and how it looks as it does today. Whether one agrees with actions in the past, the Boston that remains must be the present point of departure for determining how it will look in the future. The next step, therefore, is to examine more closely the natural areas remaining in the city.

NATURAL AREA INVENTORY

NATURAL AREA INVENTORY

The Boston Urban Wilds study was undertaken because of the existence of a number of unprotected areas, large and small, within the city. Concern for the future of these natural areas led to an extensive search, examination, and subsequently a detailed inventory of them. The inventory set out to establish a complete listing and description of all natural areas to be found in Boston. Their physical characteristics and potential for conservation and/or other uses were assessed. This provided the basis for an analysis of each site's importance in terms of environment and public benefit, and ultimately made it possible to establish priorities and define methods for protection.

View of St. John's Seminary and Chandler's Pond from Larch Road, Allston-Brighton

The inventory was thorough: each site was visited at least once (the entire Boston shoreline was explored on foot), and aerial photographs, United States Geological Surveys and city topographic maps were studied. The files of the Boston Conservation Commission, which since 1970 has been conducting hearings on proposed filling or alteration to inland and coastal wetlands, provided extensive information on individual wetland areas.

For inventory purposes, "natural areas" were regarded as areas of land or water that have retained or re-established considerable natural character even though they may not be completely undisturbed. These areas have significant amounts of flora, fauna, and/or features of geological importance and have, in addition, scenic, recreational, educational or esthetic value.

According to the 1970 Federal Census, 4,650 acres—or 14 percent—of Boston's land area is classified as "extractive" or "vacant land and agricultural open space." These categories included woodlands, wetlands and meadows as well as marginal land such as quarries, abandoned wharves, utility rights-of-way, and cleared land intended for urban renewal or road construction.

Areas of extraordinary beauty and diversity, the Urban Wilds sites contain special and distinctive features that often provide major focal points or recreational opportunities for their communities and, in many instances, reflect the history and development of the neighborhood.

All of the land in these categories was examined, and it was determined that only 2,000 acres of the 4,650 could be classified as natural areas according to the study definition. Ultimately, 143 Urban Wilds sites, totaling 2,000 acres, were identified and inventoried. These included 68 sites of geological significance, 12 inland and 8 coastal wetland sites, 28 sites having important vegetation and 27 sites along the shoreline.

The Urban Wilds sites were found in all the neighborhoods of Boston except six which are, predictably, the most densely populated: Downtown, North End, Back Bay-Fenway, South End, South Cove and South Boston. Areas of extraordinary beauty and diversity, the Urban Wilds sites contain special and distinctive features that often provide major focal points or recreational opportunities for their communities and, in many instances, reflect the history and development of the neighborhood. A description of each neighborhood in terms of the features it contains illustrates the quality and importance of these remaining natural sites.

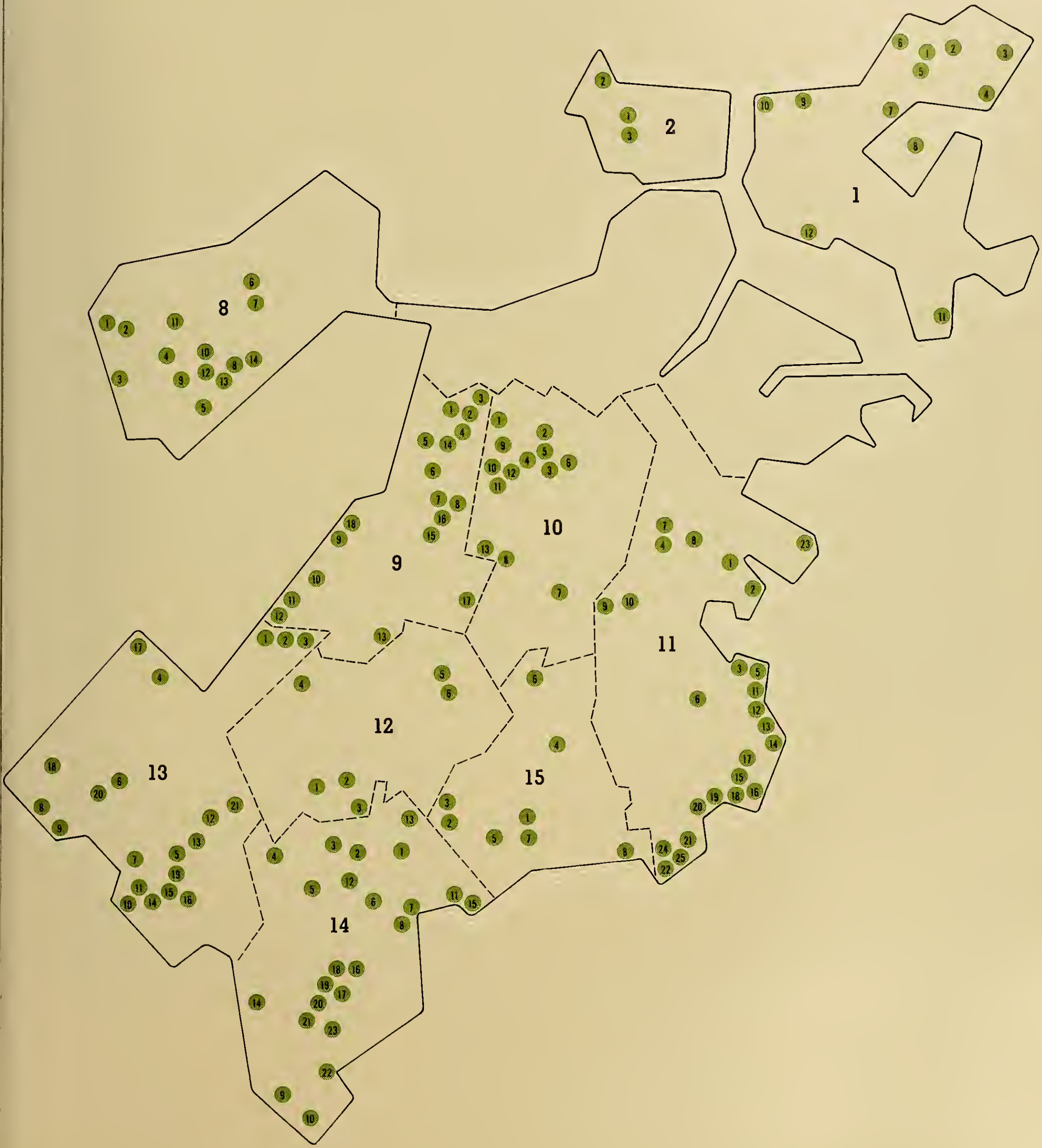
Rock outcroppings at Dell Avenue, Hyde Park

SUMMARY OF URBAN WILD SITES

SITE NUMBER	NAME	ACREAGE	WATER BODY	SHORELINE	INLAND WETLAND	COASTAL WETLAND	HILL	ROCK OUTCROPPING	QUARRY	WOODLAND	MEADOW	SCENIC VIEWS	WILDLIFE HABITAT
1	**EAST BOSTON**	**580.92**											
1	Don Orione	9.50											
2	Tower Street	0.50											
3	Belle Isle Marsh	139.40											
4	Bayswater Street	10.00											
5	U.S. Naval Reservation	15.83											
6	Chelsea Creek Meadows	30.50											
7	MBTA Extension	0.73											
8	Wood Island Bay Marsh	152.00											
9	Condor Street Beach	8.90											
10	Condor Street Overlook	10.40											
11	Governor's Island Cove	203.00											
12	"Golden Stairs"	0.16											
2	**CHARLESTOWN**	**11.07**											
1	Mystic Overlook	0.69											
2	Schrafft's Cove	9.69											
3	Charlestown Overlook	0.69											
8	**ALLSTON-BRIGHTON**	**103.52**											
1	Turnpike Overlook	7.17											
2	Crittendon Hospital	3.03											
3	St. Sebastian's	6.44											
4	Cenacles	17.50											
5	Victory Gardens	1.48											
6	Mt. St. Joseph's Academy	6.50											
7	Kennedy Rock	2.00											
8	Leamington Rock	0.47											
9	St. John's Seminary	42.25											
10	Foster Street Hill	5.73											
11	Oakland Quarry	2.25											
12	Foster Street Rock	5.00											
13	Wallingford Rock	3.00											
14	Euston Path Rock	0.67											
9	**JAMAICA PLAIN MISSION HILL**	**177.75**											
1	Harvard Quarry	6.59											
2	Allegheny Street I	0.20											
3	Allegheny Street II	0.97											
4	Judge Street	0.44											
5	"Back of the Hill"	8.10											
6	Nira Avenue Rock	1.50											
7	Cranston Street	0.20											
8	Sheridan Hillside	0.23											
9	Chapman	12.30											
10	Nazareth	39.85											
11	Daughters of St. Paul	11.62											
12	Lawrence Farm	25.88											
13	Bussey Brook	20.10											
14	Parker Hilltop	4.00											
15	Oakview Terrace	0.37											
16	Rock Hill	0.50											
17	Williams Street	9.30											
18	Hellenic Hill	35.60											
10	**ROXBURY**	**15.59**											
1	Dudley Cliffs	1.70											
2	St. James	0.53											
3	Alpine	2.52											
4	Juniper Terrace	1.58											
5	Fountain Street	2.93											
6	Warren Gardens	1.46											
7	Puddingstone Garden	0.55											
8	Franklin	0.40											
9	John Eliot Square	0.13											
10	Cedar Street	0.54											
11	St. Manica's	1.28											
12	Rockledge Street	0.53											
13	Glen Hill	1.44											
11	**DORCHESTER**	**259.71**											
1	Patten's Cove	9.18											
2	Savin Hill Cove	28.90											
3	Boston Gas Co. Easement	3.20											
4	Fernald Terrace	0.06											
5	Troy Landfill	19.07											
6	Margon Memorial	0.96											
7	The "Humps"	0.76											
8	Meetinghouse Hill Overlook	2.82											
9	Eldon Street	1.75											
10	Geneva Avenue Cliffs	1.88											
11	R&S Machine Company	11.29											

SITE NUMBER	NAME	ACREAGE	WATER BODY	SHORELINE	INLAND WETLAND	COASTAL WETLAND	HILL	ROCK OUTCROPPING	QUARRY	WOODLAND	MEADOW	SCENIC VIEWS	WILDLIFE HABITAT
11	**DORCHESTER** – Continued												
12	O. G. Kelley	19.00											
13	Taylor Street	0.11											
14	R.O.W. Shores	6.25											
15	Penn Central Railroad Easement	3.30											
16	Schoolboy Track	51.39											
17	Hallet Street Brook	3.41											
18	Keystone Shoreline	0.55											
19	Hilltop Street	1.86											
20	Granite Avenue Ledge	0.33											
21	Cedar Grove Ponds	3.53											
22	Lower Mills Gorge	0.74											
23	Columbia Point	89 00											
24	Adams Rock	0.20											
25	Huntoon Rock	0.17											
12	**ROSLINDALE**	**130.34**											
1	Metropolitan Avenue	2.50											
2	Canterbury I	2.50											
3	Grew Avenue	11.98											
4	Eldon Street	11.04											
5	Canterbury II	68.32											
6	Boston State Hospital	34.00											
13	**WEST ROXBURY**	**538.50**											
1	Bakalar	43.00											
2	Brandegee	5.00											
3	Souther	17.00											
4	Hancock Woods	47.30											
5	Waverly Road	1.75											
6	Parkway Pond	3.32											
7	Oak Ridge	0.25											
8	Dump Shoreline	80.90											
9	Rivermoor	24.60											
10	Spring Street Marsh	30.30											
11	New Haven Street	9.73											
12	Roxbury Latin School	76.38											
13	West Roxbury Quarry	70.00											
14	Rockview	1.19											
15	Dragon Rock	1.17											
16	Dana Road	0.86											
17	Hancock Swamp	7.90											
18	Sawmill Brook	68.80											
19	Centre Marsh	5.31											
20	West Roxbury High School	43.13											
21	Searle Road Rock	0.61											
14	**HYDE PARK**	**135.42**											
1	Sally Rock	0.67											
2	Sherrin Street	30.21											
3	Manterey Hilltop	6.51											
4	Boundary I	16.00											
5	Boundary II	41.00											
6	Dell Avenue Rock	1.32											
7	West Street	1.45											
8	Railroad Avenue	1.24											
9	Sprague Pond	1.35											
10	Readville Maples	2.75											
11	Euclid Street	3.87											
12	West and Austin	0.29											
13	Pleasant View	0.54											
14	Fairview Quarry	6.71											
15	Belnel	1.28											
16	Dana Avenue	0.36											
17	Margin Street	0.40											
18	Allis Chalmers	3.44											
19	Mather Brook I	0.36											
20	Mather Brook II	5.96											
21	Mather Brook III	4.46											
22	Neponset River I	2.06											
23	Neponset River II	3.19											
15	**MATTAPAN**	**80.47**											
1	Gladeside I	4.50											
2	Livermore Street	30.00											
3	Pendergast Preventorium	20.80											
4	Willowwood Rock	0.16											
5	Woodhaven	2.10											
6	Blue Hill Rock	20.33											
7	Gladeside II	1.09											
8	Baker Chocolate Seawall	1.49											
	TOTAL ACREAGE:	**2033.29**											

These areas have significant amounts of flora, fauna, and/or features of geological importance and have, in addition, scenic, recreational, educational or esthetic value.



East Boston became an urbanized residential community in the mid 19th century. A series of hills surrounded by Chelsea Creek, tidal flats, salt marsh and a deep-water harbor provided both a suitable setting for attractive residential areas and natural resources to be capitalized for commercial and industrial purposes. Large shipbuilding operations were established at the foot of Jeffries Point and elsewhere along the East Boston harbor shoreline. Shellfish operations and clamming businesses were conducted in the tidal flats surrounding East Boston and the islands near it.

Belle Isle Marsh and Belle Isle Inlet

As the district became more populated, public parks were constructed on top of the hills and on land adjacent to the the harbor. For example, Wood Island Park, designed by Frederick Law Olmsted, was composed of 63 acres of wooded hills, beaches, meadows and tidal flats. Wood Island Park was destroyed, however, by the expansion of Logan Airport after World War II and no equivalent replacement has been provided.

Except for several parks along the shoreline, East Boston is now a landlocked community. Although the water is visible from several vantage points and must be passed over or under to get there, public access to the water in East Boston is limited. At the same time, the largest saltwater marshes in the city can be found within a five-minute walk of both the Wood Island and Orient Heights MBTA stations. These salt marshes, tidal flats and adjacent upland areas comprise approximately 515 acres and are the most expansive open spaces remaining in Boston. Extraordinary panoramas of Boston Harbor, the Harbor Islands, the hills of Revere, Chelsea and Winthrop and the downtown skyline can be viewed over acres of billowing reedgrass. In the Spring and Fall great flocks of migrating birds can be seen resting and feeding in these saltwater marshes.

There are also some small sites along the banks of Chelsea Creek, which is used primarily for marine-related industry. Adjacent to McClellan Highway, an abandoned underground tank farm has become established as a meadow of wild grasses. The embankment of an abandoned railroad right-of-way has been stabilized by grasses and shrubs directly adjacent to the creek.

Behind an old granite wall built during the Depression, a narrow gravel beach and fallow field remain amidst adjacent land uses of tank farms and maritime businesses. From this little beach, dramatic views of marine activity can be seen.

Atop Orient Heights, a section of the hill which was once quarried for sand and gravel has become wooded; on top of the hill, views across the city to the rolling Blue Hills in Milton can be seen from a broad meadow of wildflowers.

View of Wood Island Bay Marsh from Don Orione

View of downtown Boston from Bayswater Road

Charlestown was originally settled a few months prior to the Boston peninsula because of its access to the harbor along its shoreline, the high, dry land for locating residences, the good visibility of surrounding areas from atop its three hills, and its access to inland areas. The hills — Bunker, Breed's and Town — played an important role in the War for Independence and on the harbor was established one of the nation's most important early naval shipyards. Charlestown has dedicated two hilltop settings for public parks: the Bunker Hill Monument atop Breed's Hill is one of the nation's most revered symbols, and Frederick Law Olmsted designed Doherty Park, a naturalistic, wooded park atop a section of Bunker Hill.

View of Bunker Hill Monument from Mead Street

Several steeply sloping sections of Bunker Hill in the vicinity of Mead Street were never built upon, and these open spaces are used today as play areas by neighborhood children. Although most of Charlestown is built on hills, views of the Boston mainland are generally limited to private homes located on top of Bunker Hill and Breed's Hill. The panoramic views from the open spaces adjacent to Mead Street provide vistas of Bunker Hill Monument, Beacon Hill, downtown Boston and Cambridge.

Adjacent to the Ryan Playground and behind the Schrafft factory, a ten-acre tidal cove remains amidst large industrial operations. Though the water in the Mystic River is polluted, the potential for expansion of the playground is significant.

The meadow at Mount St. Joseph's Academy

Allston-Brighton has always been characterized by its "beautiful hills commanding delightful views." In the 1895 book *How to See Boston*, Sir Charles Dilke describes Allston-Brighton as an "undulating region, dotted with crystal ponds, superbly wooded and covered for miles with country-seats in every conceivable style of architecture, a portfolio crammed with delicious pictures." Around the turn of the century, farms in Allston-Brighton grew much of Boston's produce, and fields were used to graze cattle before slaughter. Allston-Brighton's "pleasant and shady" streets — principally, Commonwealth Avenue (laid out by Frederick Law Olmsted) — were used by residents for Sunday outings as were the Chestnut Hill Reservoir promenades.

Today, over 100 acres of open space remain that are characteristic of Allston-Brighton's 19th century landscape. Small, tree-shaded streets traverse many of the hills where spectacular panoramas of the city can be viewed from open hillside sites, while on the grounds of St. John's Seminary, broad meadows and apple orchards rise up to a hillside wooded by majestic Oak trees. An unusual Sugar Maple grove and a meadow behind the Cenacles can be seen from Chandler's Pond. And adjacent to Foster Street, an unusual rock outcropping, a "roche moutonée," serves as an outdoor classroom for geology students and is a popular place for neighborhood children to play.

Another large rock outcropping adjacent to Cambridge Street near Warren Street rises 85 feet above the street and forms a natural backdrop for the densely settled neighborhood.

Rock outcropping at Foster Street

Roxbury was originally called "Rocksberry" because of its rocky hills and outcroppings. Moses King in *How to See Boston* describes Roxbury in 1895 as "a beautifully diversified region of hills and crags, meadows and dales, trees and gardens."

Aerial view of Roxbury

Prior to annexation by Boston in 1867, the Town of Roxbury had already established ten public parks, including Highland Park, Washington Park and Walnut Park, on hilltop sites or in areas of massive rock outcroppings and rocky ledges. These parks and the beautiful panoramas from them can be seen today essentially as they were a century ago.

Also in Roxbury an abandoned quarry, a 75-foot-high rock cliff, rocky ledges and sections of several wooded hillsides remain amidst historic homes and public buildings. On Rockledge Street, a noteworthy Roxbury Puddingstone outcropping rises 30 feet above the surrounding residential buildings. A dramatic view of John Eliot Square and the downtown skyline can be seen from the high elevations of the rock.

Behind the new Saint Joseph's housing development rises a 70-foot-high rocky hill. Oak, Maple and Ash trees grow in the cracks of the rock and serve as a habitat for wildlife in the Spring.

The Warren Gardens housing development has been built adjacent to a massive Roxbury Puddingstone outcropping. The rock functions as both an esthetic feature of the development and a play area for neighborhood children.

Cedar Square

Dorchester and Mattapan were incorporated on the same date as Boston: September 17, 1630. Two hundred fifty years later, these neighborhoods were described as being "situated on Dorchester Bay, an arm of Boston Harbor, and with numerous hills overlooking marine views. It has long been a favorite place of suburban residences and of country seats and orchards."* Many of the neighborhood names derive from the physical characteristics of their locations: Meeting House Hill, Mount Bowdoin, Field's Corner, Ashmont and Lower Mills. A broad historical description of Dorchester can still be applied to several areas: "It is quite rural; some of its streets lead into most delightful lanes, which are much enjoyed by the pedestrian. Here are also fine country residences . . . especially at Savin Hill, a picturesque eminence, with water on three sides, and commanding a superb view."* Fortunately, Dorchester has retained the fine scenic parks atop several of its hills — Savin Hill, Jones Hill, Mount Bowdoin and Meeting House Hill are examples — and a series of public parks and beaches along the shoreline.

In various sections of Dorchester and Mattapan, rocky "eminences" and wooded hilltop sites still remain open despite dense urbanization nearby. Adjacent to Geneva Avenue, several rocky areas rise 40 feet above surrounding homes and serve as play areas for neighborhood children.

Although Dorchester has one of the longest shoreline frontages of any part of Boston, only 30 percent of it is accessible to the public. Adjacent to industrial and commercial operations, the inventory found approximately one-half mile which could be reclaimed for recreational uses. Another site at the base of Savin Hill near the Boston Globe plant is a tidal cove surrounded by tidal flats and reedgrasses which have been left undisturbed.

Tidal salt marsh, Neponset River Reservation, Dorchester

The only remaining rapids in Boston, on the Neponset River, Dorchester

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*King, Moses. *How to See Boston* 1895.

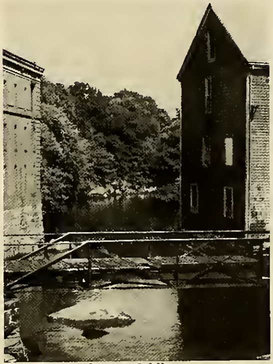
Directly across Morrissey Boulevard, a nine-acre salt marsh, a sandy beach and tidal flats remain in relatively undisturbed condition. Salt marshes and tidal flats have also become established along the shoreline of Port Norfolk.

Along the Neponset River in Dorchester and Mattapan, several outstanding natural areas also remain. Behind the mill buildings at Dorchester Lower Mills, the walls of a rocky gorge composed of Roxbury Puddingstone rise 70 feet above the river. The gorge is heavily wooded by Red Maple trees and an unusual ground cover of evergreen ferns can be seen. Further upstream behind Belnel Street in Mattapan, a two-acre meadow with several specimen Willow trees gently slopes toward the river. At the northern edge of the meadow, a massive rock outcropping rising 20 feet provides a focal point for the area.

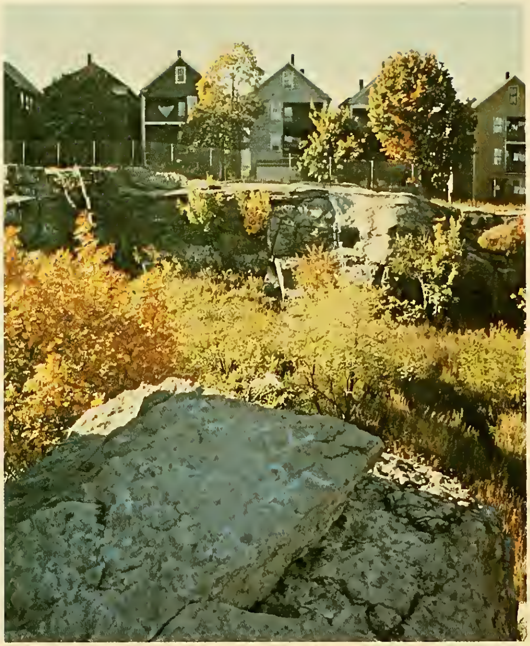
In the western section of the grounds of the Boston Sanatorium in Mattapan, a four and one-half-acre natural area has remained undisturbed. Nestled behind rows of comfortable single-family homes, this area is composed of a small pond, a wooded swamp, gently rolling topography and a woodland of mature Red Oaks. This area appears to be a favorite children's play area.

Tenean Beach, Dorchester

Behind Mattapan Square and adjacent to Woodhaven Street, a two-acre natural area enhances the pleasant neighborhood. This area has several major distinguishing features: a 15-foot-high rock outcropping provides a natural wall along the street; a small section of the area has been quarried and is the place where children play; and mature Oak trees tower over a dense woodland understory of Pine and Oak seedlings, mosses, lichens and low-growing Blueberry bushes.



Dorchester Lower Mills



Harvard Quarry

An elderly resident of **Mission Hill/Jamaica Plain** recalls, "When we were kids . . . there were three fields up top of the hill and we used to call them Sleigh Field, the Cow Field, and the Daisy Field. We used to slide down over Parker Hill in the winter on top of our mothers' tin boilers that they used to boil the clothes in on the stove." Another resident remembers "different spots on the hill where kids could lose themselves. There was the ledge, there was the baby ledge down on Carmel Street . . . and then you'd come back over to the Fisher mountains — that's what we called them — the Fisher mountains. The ledge had cliffs and rocks and trees. Even though it was in the city, it was like being in the wild."*

The cliffs, rocks, trees and meadows can still be found today. Even though these natural areas are privately owned, they are familiar open spaces enjoyed by neighborhood residents. Sweeping views of the downtown skyline and surrounding areas from the high points of the cliffs and hills make these natural sites valuable.

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*Boston 200 Neighborhood History

Mother Brook, Hyde Park

West Roxbury, Hyde Park, Roslindale and the southern section of Jamaica Plain* today retain many of the charms described in an 1897 Appalachian Mountain Club tour guide: "Although joined to the city for nearly a quarter of a century, West Roxbury has slowly assumed metropolitan ways, and in the neighborhood of some of its most traveled thoroughfares country sounds and sights are yet to be enjoyed. Off from the highways, green lanes and rural byways are chanced upon . . . and many of its roads have exceptional charms." With great foresight, beautiful areas were dedicated for public open space uses prior to 1900: Jamaica Pond and the Arnold Arboretum (both designed by Frederick Law Olmsted); Mt. Bellevue, at 364 feet the highest of Boston's hills; the Stony Brook Reservation, which is a vast wilderness of brooks, ponds, wetlands and hills; and the Forest Hills Cemetery.

One can still encounter "country sounds and sights" in these districts. Extensive woodland, gently rolling hills and rock outcroppings, ponds and various types of inland wetlands can still be found. In West Roxbury, for example, a 125-acre inland wetland along Sawmill Brook is composed of a diversity of shrub and tree swamps and freshwater marshes. Views across the marsh to Brook Farm, the place where a famous experiment in communal living was tried from 1841–47, and the setting of Hawthorne's *Blithedale Romance*, are reminiscent of the grandeur of Boston's 18th and 19th century landscapes.

In the vicinity of Roxbury Latin School in West Roxbury, "the most rural parts" of the district remain as they appeared in the 19th century. A densely wooded area surrounds several ponds, and along the perimeter of the ponds, massive granite rock outcroppings rise dramatically out of the water.

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*All these neighborhoods were once part of West Roxbury.

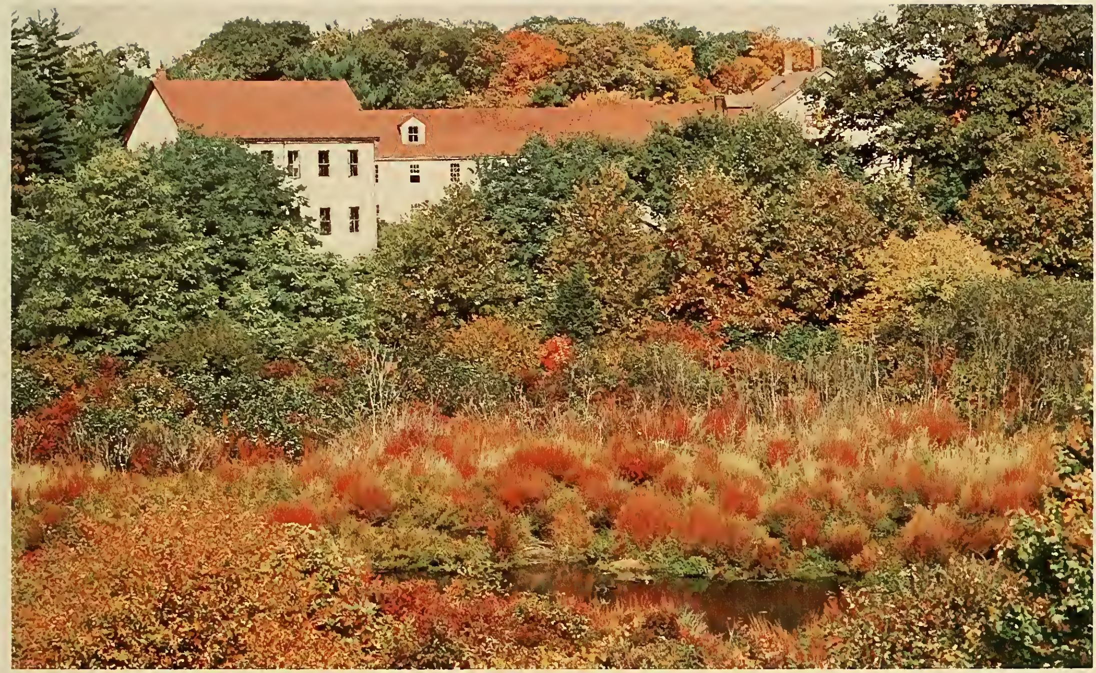
Fairview Quarry, Hyde Park

An extensive wooded swamp composed of Highbush Blueberry, Alder, Viburnums, Red Maple and Yellow Birch trees has become established in various sections of the property, and numerous species of birds have been observed here.

Along the western border of Boston, a number of institutions own large natural areas, several of which have features of outstanding beauty. Southwest of Jamaica Pond, a wooded drumlin hill rises gracefully above parkland. In the 1750's the setting for the summer home of Sir Francis Bernard, the last British governor of Massachusetts, the hill contains a grove of mature European Beech trees, some of which have a diameter of nearly five feet; a grove of mature White Pine trees near the summit of the hill; a ten-acre meadow on top of the hill from which the Blue Hills and the Stony Brook valley can be seen; and the largest raspberry patch in the city.

In the vicinity of Westbrook Village, an eight-acre natural area gives a rural appearance to the neighborhood. A large wooded swamp, a meandering brook, several large rocky knolls and mature Oak woodland are the major features of the site. A noteworthy group of Roxbury Puddingstone rock outcroppings can be observed on top of one of the knolls.

A variety of natural areas are located along the Neponset River, Mother Brook and Charles River. Adjacent to the Charles River, 80 acres of marshland are a major wildlife habitat. Along the banks of Mother Brook, dense groves of woodland have become established, lending a spirit of wildness to the brook. A variety of natural resources including a freshwater marsh, wooded swamp, woodlands and meadows are part of the Neponset River Reservation in the neighborhood of Readville in Hyde Park. Additional natural areas including a meadow, woodland and wooded swamp remain unprotected. Some of these natural areas presently function as buffers to more urban land uses and as water storage areas for excessive runoff in periods of flooding.



Brook Farm and Sawmill Brook, West Roxbury

ENVIRONMENTAL SIGNIFICANCE FOR URBAN WILDS SITES

Each of the 143 sites identified in the Urban Wilds study had one predominant undisturbed natural feature and was categorized in the inventory according to this feature. It was found that each site came within at least one of five categories with regard to its natural features: 1) sites containing water bodies, 2) sites on hills, 3) sites with prominent geological features, 4) wetlands, and 5) woodland sites.

These categories of environments have value on many levels. The most obvious is that frequently they are very beautiful. This is not a trivial attribute, particularly in locations where natural beauty provides relief from urban development. Some of these areas also provide the last easily observable clues to Boston's geological history. Finally, many of the sites are important to the ecology of their surroundings.

The following table presents a summary of the five site categories in terms of environmental significance and indicates the neighborhoods in which examples of each category are found. The significance of each site becomes an important factor in the overall analysis of the sites and the establishment of priorities for protection, which are discussed in Chapter 3.

PONDS, BROOKS, RIVERS

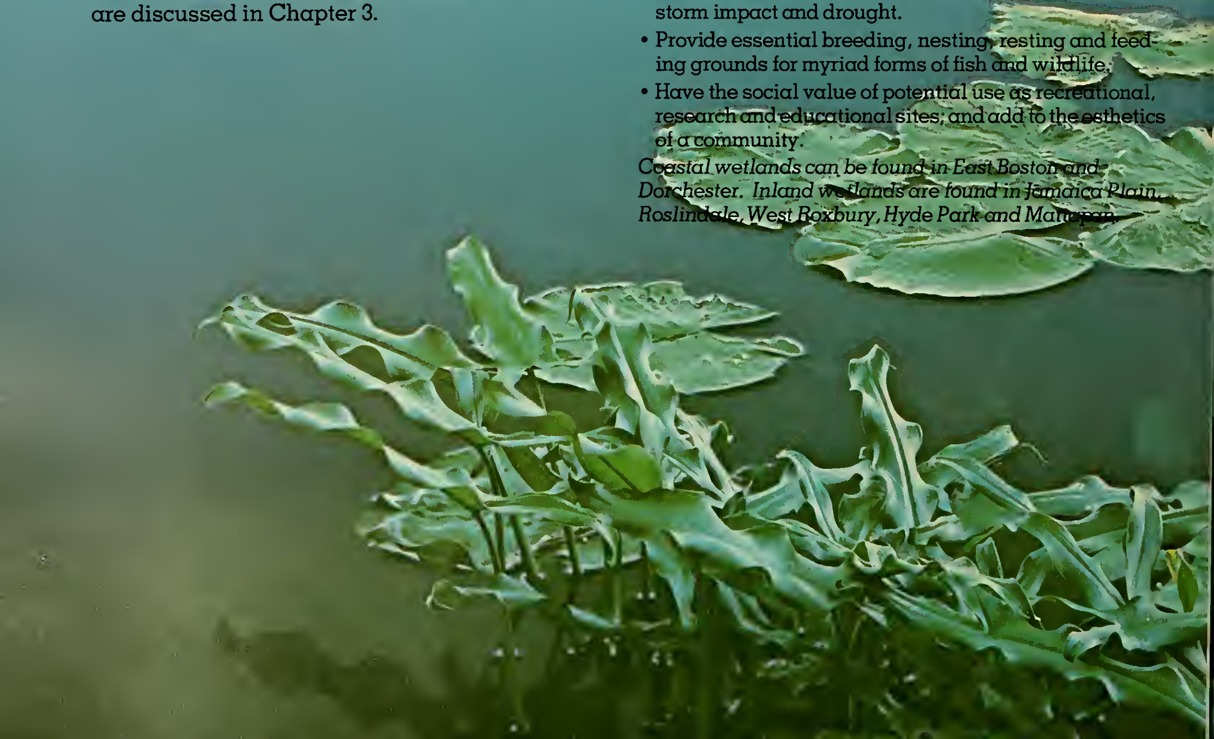
- Contribute to overall environmental health. Brooks and rivers are major corridors for transporting nutrients and sediments as well as being pathways for many species of birds and animals. They bind together diverse natural features such as hillsides, woodlands and wetlands with the shared resource of water, and they are integral parts of the hydrological and nutrient cycles.
- Affect the quality of a community's water resources. As a source for groundwater recharge, water flow and reservoir storage, clean water in ponds, brooks and rivers is an important resource.

Ponds, brooks and rivers can be found in Jamaica Plain, East Boston, West Roxbury, Hyde Park, Mattapan and Dorchester.

INLAND AND COASTAL WETLANDS

- Affect the quality of water. Aquatic plants change inorganic nutrients into organic material, storing it in their leaves or soil. These plants also slow the flow of water through a wetland, allowing silt to settle out. Thus, the removal of a wetland causes faster runoff of dirtier water. Wetlands consequently protect the downstream or offshore resources of the community from siltation and pollution.
- Retain water during dry periods and hold it back during floods, thus keeping the water table high and relatively stable. Wetlands protect against flooding, storm impact and drought.
- Provide essential breeding, nesting, resting and feeding grounds for myriad forms of fish and wildlife.
- Have the social value of potential use as recreational, research and educational sites; and add to the esthetics of a community.

Coastal wetlands can be found in East Boston and Dorchester. Inland wetlands are found in Jamaica Plain, Roslindale, West Roxbury, Hyde Park and Mattapan.



HILLS

- Are geological features of the landscape whose slope and soils are in a balance with vegetation, underlying geology, and the amount of precipitation. Maintaining this equilibrium reduces the danger to safety posed by unstable hillsides. Disturbance of hillsides can result in the loss of slope and soil stability as well as lead to increased erosion, increased runoff, and the consequent destruction of a community's esthetic resources.
- Degradation of hillsides as a result of erosion, loss of vegetation and damage to downstream areas deprives a community of its attractive and distinctive setting.

Hills are found in East Boston, Charlestown, Allston-Brighton, Mission Hill, Jamaica Plain, West Roxbury, Roslindale, Mattapan and Dorchester.

ROCK OUTCROPPINGS, CLIFFS AND BOULDERS

- Are geological features of the landscape which serve as evidence of the processes of glaciation.

Rock outcroppings, cliffs and boulders can be found in Allston-Brighton, Jamaica Plain, West Roxbury, Roxbury, Hyde Park, Mattapan and Dorchester.

WOODLANDS

- Are important moderators of climatic phenomena such as flooding and high winds and thus protect communities from siltation and erosion resulting from heavy runoff or wind.
- Filter water percolating into groundwater reservoirs through the woodland floor.
- Improve air quality by absorbing air pollution.
- Are buffers to sights and sounds of civilization.
- Are an important resource for wildlife and general environmental health and are important for human recreation and enjoyment.

Woodlands are found in Allston-Brighton, Jamaica Plain, West Roxbury, Hyde Park, Mattapan and Roslindale.

3

ANALYSIS AND EVALUATION

The fact that an urban area contains relatively undisturbed natural features establishes it as an important resource for urban recreation and/or conservation purposes. Accordingly, all Urban Wilds sites are considered critically worthy of conservation and protection.

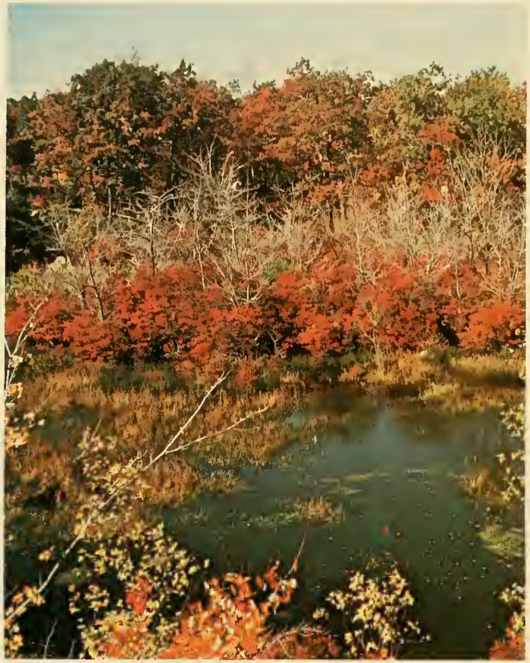
However, with a total of 143 sites identified, it is impossible to develop a realistic program for the immediate protection of every site. While all the sites are valuable in their own right and each demands individual strategies and solutions, various factors must be weighed in establishing realistic priorities for protection.

Therefore, each site has been rated according to its general significance, the needs of the neighborhood in which it is located, and the extent to which it is immediately threatened by development. Natural areas are often taken for granted by neighborhood residents until they are threatened by a specific development proposal; unfortunately, community involvement often comes too late to effect any major changes in a development program, particularly if the developer has stayed within the limits of the zoning code. Therefore, those sites currently under consideration for development purposes demand immediate action and consequently assume top priority in any conservation action program.

Other characteristics of the sites and of the areas in which they are located are used as a guide to identify those sites in need of immediate action; those in which action could be delayed a short time; and those in which a longer postponement is possible. The following discussion presents, in some detail, the three major classification categories underlying the Urban Wilds priority system and a general discussion of the system itself.

NATURAL AREA SIGNIFICANCE

The environmental significance of each Urban Wilds site has been determined by analyzing its physical and visual characteristics as well as its educational, recreational or historical potentials. Based on a number of specific criteria, sites have been ranked on a scale from most to least significant. The characteristics of the three major degrees of significance are as follows:



Roxbury Latin School, West Roxbury, a "Most Significant" site

Qualities of a "Most Significant" Natural Area

- Is large and undisturbed, retaining a "rural" appearance.
- Ranges from 25 acres to 100 acres in size.
- Has a diversity of natural features and vegetation.
- Is generally in excellent condition.
- Is of exceptionally high scenic interest.
- Offers opportunities for a wide variety of educational and recreational uses.
- Enhances the surrounding neighborhood because of its high esthetic quality.

For example:

- 300 acres of saltwater marshes, tidal flats, tidal creeks and a one-half mile long beach adjacent to the harbor in East Boston.
- 125 acres of freshwater wetlands and upland areas adjacent to the Sawmill Brook in West Roxbury.

Qualities of a "Significant" Natural Area

- Has one predominant natural or scenic feature.
- Ranges in size from 5 acres to 25 acres (the average size generally being 10 acres).
- Is generally in good condition, although illegal dumping of debris is not uncommon.

Harvard Quarry, Mission Hill-Jamaica Plain, a "Significant" site

- Has portions that require landscape reclamation to restore natural character.
- Offers outdoor recreational opportunities.

For example:

- 20 acres of saltwater marshes and tidal coves adjacent to Savin Hill in Dorchester.
- An 11-acre meadow of wildflowers and grasses which offers scenic views of several surrounding hills in Allston-Brighton.

Qualities of a "Less Significant" Natural Area

- Is small, with generally disturbed conditions.
- Ranges in size from one-half acre to five acres.
- Is usually located adjacent to water, and due to prior industrial activity, has had the natural features of its shoreline highly disturbed. Scenic quality along the shore front is excellent, however.
- Would require considerable landscaping in order to restore a completely natural appearance.

For example:

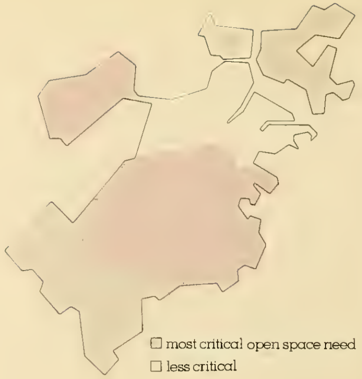
- Many properties along the shorelines of the Charles River, Mother Brook, Neponset River and Dorchester Bay which could be improved with landscaping to expand existing State and City waterfront parks.
- Four acres of Oak woodland in Mattapan which are a habitat for a variety of wildlife.

NEIGHBORHOOD OPEN SPACE NEEDS

Urban Wilds sites were found in all Boston neighborhoods except six: the CBD, North End, Back Bay-Fenway, South End, South Cove and South Boston.

In each of the neighborhoods where Urban Wilds were found, the sites provide opportunities for passive recreation and other outdoor enjoyment close to home. These opportunities are most needed wherever low income and limited mobility prevent families from traveling to other recreation areas and participating in public or commercial recreation activities.

In some Boston areas, the need for open space is tremendous, and neighborhoods in critical need of additional open space have been identified. The factors which were analyzed and evaluated for each neighborhood include: 1. quantity and quality of existing public open spaces, 2. family income, 3. population density, 4. population age-group structure and 5. recent population change.



The analysis revealed that the neighborhoods fall into two categories of open space needs: most critical and less critical.

The **most critical** open space needs are in Roxbury, Jamaica Plain, Dorchester, Mattapan, Allston-Brighton and Roslindale. These neighborhoods have the largest number of low-income families, large groups of elderly and of young people, and are high density urban districts. All of these facts suggest that these neighborhoods need additional public open spaces which will be easily accessible and which will satisfy the recreational needs of both young and old residents. In addition, more than one half the population of Dorchester, Mattapan and Allston/Brighton is not within easy reach of neighborhood parks. Moreover, there are serious problems of accessibility related to public open space in Jamaica Plain, Brighton and Dorchester.

Less critical needs were found in Charlestown, West Roxbury, Hyde Park and East Boston. With the exception of Charlestown and East Boston, these are less dense neighborhoods. Fair amounts of private open space provide for a large part of the recreational needs of residents. However, the population recently has been increasing in West Roxbury and Hyde Park and additional public open space will soon be needed. In addition, a large proportion of residents in these areas are elderly persons who need more locally accessible open spaces.

THREAT OF DEVELOPMENT

All Urban Wilds sites in Boston are under constant threat of urbanization. As growth reduces the amount of available land, even sites which, in the past, had been less desirable because of natural feature "difficulties" (such as a large rock outcropping) begin now to be viewed as potential sites for new building. Roughly one-third of the Urban Wilds sites are under some degree of threat from development. Active proposals and plans have already been made for some; for others, proposals previously made have been postponed because of financial difficulty or strong community opposition.

New threats will arise for these and other Urban Wilds sites. The very features which make a particular site valuable to preserve may be those sought for building reasons as well. However,

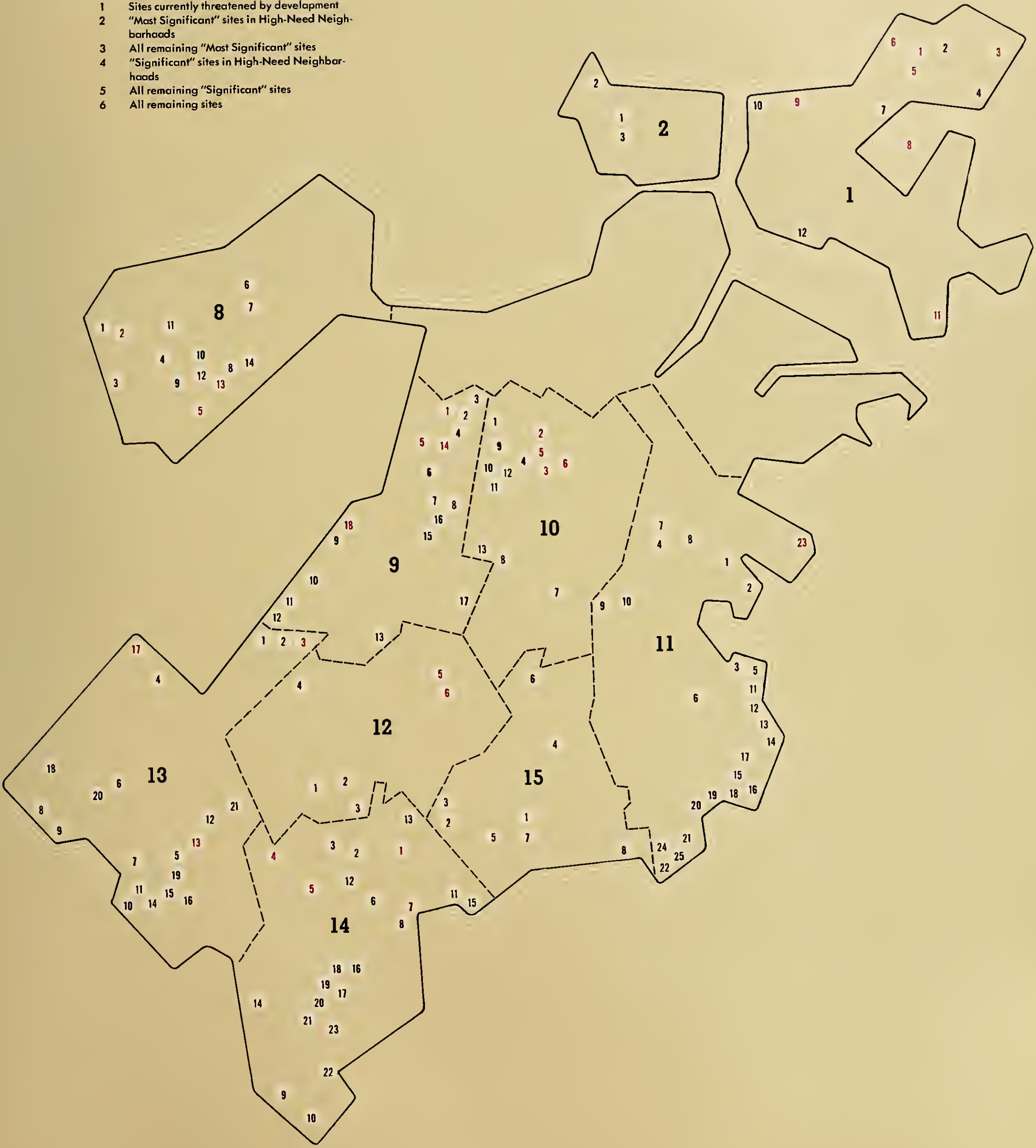
Roughly one-third of the Urban Wilds sites are under some degree of threat from development.

Hancock Woods, West Roxbury, a site threatened by development

PRIORITIES FOR ACTION

SITE NUMBER	NAME	MOST SIGNIFICANT	SIGNIFICANT	LESS SIGNIFICANT	MOST CRITICAL	LESS CRITICAL	THREAT OF DEVELOPMENT	ACTION SEQUENCE*
		NATURAL AREA SIGNIFICANCE			NEIGHBOR–HOOD NEEDS			
1	**EAST BOSTON**							
1	Dan Orione						●	1
2	Tower Street							6
3	Belle Isle Marsh						●	1
4	Bayswater Street							3
5	U.S. Naval Reservation						●	1
6.	Chelsea Creek Meadows						●	1
7.	MBTA Extension							6
8.	Wood Island Bay Marsh						●	1
9	Condar Street Beach						●	1
10	Condor Street Overlook							6
11	Governor's Island Cove						●	1
12	"Golden Stairs"							6
2	**CHARLESTOWN**							
1	Mystic Overlook							6
2	Schrafft's Cove							5
3	Charlestown Overlook							5
8	**ALLSTON-BRIGHTON**							
1	Turnpike Overlook							6
2	Crittendon Hospital						●	1
3	St. Sebastian's							6
4	Cenacles							2
5	Victory Gardens						●	1
6	Mt. St. Joseph's Academy							6
7	Kennedy Rock							4
8	Leamington Rock							6
9	St. John's Seminary							4
10	Foster Street Hill							4
11	Oakland Quarry							6
12	Foster Street Rock							2
13	Wallingford Rock						●	1
14	Euston Path Rock							6
9	**JAMAICA PLAIN MISSION HILL**							
1	Harvard Quarry						●	1
2	Allegheny Street I							6
3	Allegheny Street II							6
4	Judge Street							6
5	"Back of the Hill"						●	1
6	Nira Avenue Rock							4
7	Cranston Street							6
8	Sheridan Hillside							6
9	Chapman							4
10	Nazareth							2
11	Daughters of St. Paul							4
12	Lawrence Farm							2
13	Bussey Brook							2
14	Parker Hilltop						●	1
15	Oakview Terrace							6
16	Rock Hill							6
17	Williams Street							6
18	Hellenic Hill						●	1
10	**ROXBURY**							
1	Dudley Cliffs							4
2	St. James						●	1
3	Alpine						●	1
4	Juniper Terrace							6
5	Fountain Street						●	1
6	Warren Gordens						●	1
7	Puddingstone Gorden							6
8	Franklin							6
9	John Eliat Square							6
10	Cedar Street							6
11	St. Monica's							6
12	Rockledge Street							4
13	Glen Hill							6
11	**DORCHESTER**							
1	Patten's Cove							4
2	Savin Hill Cove							4
3	Baston Gas Co. Easement							6
4	Fernald Terrace							6
5	Tray Landfill							6
6	Morgan Memorial							6
7	The "Humps"							6
8	Meetinghouse Hill Overlook							6
9	Eldon Street							6
10	Geneva Avenue Cliffs							4
11	R&S Mochine Company							6
11	**DORCHESTER** – Continued							
12	O. G. Kelley							6
13	Taylor Street							6
14	R.O.W. Shores							6
15	Penn Central Railroad Easement							6
16	Schoolboy Track							6
17	Hallet Street Brook							6
18	Keystone Shoreline							6
19	Hilltop Street							6
20	Granite Avenue Ledge							6
21	Cedar Grove Ponds							6
22	Lower Mills Gorge							2
23	Columbia Point						●	1
24	Adams Rock							6
25	Huntoon Rock							6
12	**ROSLINDALE**							
1	Metropolitan Avenue							6
2	Canterbury I							6
3	Grew Avenue							6
4	Eldon Street							4
5	Canterbury II						●	1
6	Baston State Hospital						●	1
13	**WEST ROXBURY**							
1	Bakalar							3
2	Brandagee							3
3	Souther						●	1
4	Hancock Woods							5
5	Waverly Road							6
6	Parkway Pond							6
7	Oak Ridge							5
8	Dump Shoreline							6
9	Rivermoor							5
10	Spring Street Marsh							6
11	New Haven Street							6
12	Roxbury Latin School							3
13	West Roxbury Quarry						●	1
14	Rockview							6
15	Dragon Rock							6
16	Dana Road							5
17	Hancock Swamp						●	1
18	Sawmill Brook							3
19	Centre Marsh							6
20	West Roxbury High School							5
21	Searle Road Rock							6
14	**HYDE PARK**							
1	Sally Rock						●	1
2	Sherrin Street							5
3	Monterey Hilltop							5
4	Baundary I						●	1
5	Baundary II						●	1
6	Dell Avenue Rock							6
7	West Street							5
8	Railroad Avenue							5
9	Sprague Pond							6
10	Readville Maples							6
11	Euclid Street							5
12	West and Austin							5
13	Pleasant View							5
14	Fairview Quarry							5
15	Belnel							5
16	Dana Avenue							6
17	Margin Street							5
18	Allis Chalmers							6
19	Mother Brook I							6
20	Mother Brook II							6
21	Mother Brook III							6
22	Neponset River I							5
23	Neponset River II							5
15	**MATTAPAN**							
1	Gladeside I							6
2	Livermore Street							6
3	Pendergast Preventorium							4
4	Willowwood Rack							6
5	Woodhaven							6
6	Blue Hill Rock							6
7	Gladeside II							6
8	Baker Chocolate Seawall							6
TOTAL		17	44	82			27	

*Priorities for Action	Site To Be Addressed
1	Sites currently threatened by development
2	"Most Significant" sites in High-Need Neighborhoods
3	All remaining "Most Significant" sites
4	"Significant" sites in High-Need Neighborhoods
5	All remaining "Significant" sites
6	All remaining sites



Therefore, first priority consideration should be given to sites currently threatened by urban development, regardless of their significance ranking or the neighborhoods in which they are located.

once built upon, such features are lost forever. Therefore, first priority consideration should be given to sites currently threatened by urban development, regardless of their significance ranking or the neighborhoods in which they are located. This is not to say that all development must be unconditionally opposed. It does mean, however, that where building development on an Urban Wilds site would negate its open space value, the City should carefully consider the proposal and evaluate possibilities for protecting some meaningful part of the site prior to making final decisions regarding development.

Action on sites not currently threatened by development should be based on ranking of significance and neighborhood needs. Thus, protection efforts will be applied at sites which have been rated as "Most Significant" and which are located in high-need neighborhoods. Once protection of these areas has been secured, efforts should be made to secure all remaining areas rated as "Most Significant" and then those "Significant" areas found in remaining high-need neighborhoods, and so forth.

The table below lists the proposed sequence of action based on the priority ranking for each site.

Priorities for Action	Site To Be Addressed
1.	Sites currently threatened by development
2.	"Most Significant" sites in High-Need Neighborhoods
3.	All remaining "Most Significant" sites
4.	"Significant" sites in High-Need Neighborhoods
5.	All remaining "Significant" sites
6.	All remaining sites

Actions on these sites will not progress in the linear fashion depicted in the above table. From time to time, for example, pressure for use and/or protection of a site will occur (e.g., from community groups) and action will be taken regardless of where the site is located on the priority list. This should be viewed as a positive trend since it indicates a growing awareness on the part of the community concerning the value of its remaining natural areas.

4

STRATEGIES AND RECOMMENDATIONS

STRATEGIES AND RECOMMENDATIONS

Most of the Urban Wilds sites require more protection than is available through existing land-use regulations and zoning. Under the Boston Zoning Code, conservation of natural features is left to chance or, if public funds are involved in the development of the land, to the City's limited control through the design review process.

Affirmative, permanent protection is needed for many of the Urban Wilds sites. Once designated public conservation land, a site cannot be later diverted to other uses except by a ⅔ vote of the State Legislature. Analysis of the ownership and tax status conditions of all 143 Urban Wilds sites showed that one-third of them are already owned by the City of Boston and other units of government and can, therefore, permanently be preserved without cost to the City and without further reducing the existing tax base. In addition, those Urban Wilds sites that are privately owned can, through various strategies, also be protected without great financial strain on the City. The conservation methods below are appropriate for effectively protecting Boston Urban Wilds sites.

TRANSFER OF GOVERNMENT PROPERTY— Land held by local and State governments can be transferred by each of them into the care and control of appropriate conservation or open space management agencies for conservation and recreation purposes. Forty Urban Wilds sites are currently owned by the State and City governments and can be protected by this method. The largest acreage is held by the Massachusetts Port Authority in East Boston. These properties could be transferred to the Metropolitan District Commission, for permanent open space management and preservation. The remaining government-owned Urban Wilds sites located in Roxbury, West Roxbury and Dorchester are currently in the City of Boston Real Property Department, and could be transferred to the Boston Conservation Commission. The Boston Redevelopment Authority has title to six sites in Charlestown and in Roxbury which appear to be unbuildable. These also could be transferred to the Boston Conservation Commission.

FEE SIMPLE ACQUISITION—The City can, of course, simply purchase privately owned Urban

Wilds sites if and when an owner decides to sell. The existing reserved monies of the City's parkland replacement fund are available for this purpose without current cost to the City. Also there are State and Federal reimbursement aids for such purchases currently available in amounts up to 75 percent (when combined) of the approved project land acquisition cost.

GIFTS OF LAND—The City of Boston, by either its Park Commission or its Conservation Commission, can accept gifts of privately owned land in fee. These gifts of land could be donated from personal, corporate or institutional sources. In addition, gifts of land from State or Federal units of government could also be accepted. This is effective and economically desirable. It does not require expenditure of public funds, and it may result in tax savings for the donor.

CONSERVATION RESTRICTIONS—The City of Boston may also seek and accept gifts of a less-than-fee interest in privately owned Urban Wilds sites and other lands and may propose to purchase any such interest. A conservation restriction may be so drawn as to accomplish major urban open space protection in perpetuity while leaving the property on the tax rolls with an infinitely varied degree of development rights. By some variant of this method, the owner may agree to keep either all or part of his/her land in much the same natural state it was at the time of agreement, and he/she retains part of the ownership of the land and may in the future sell, give or lease that interest in that property to any other person or entity. The degree of public access on the restricted property would be regulated by the terms of the agreement. The owner may choose to allow public access and/or use of property, or may not, and may limit the hours, days or seasons of use and of access. Such agreements may not require any expenditure of public funds and the land continues at the same valuation on the city property tax rolls. This procedure, in all its infinite variety of accommodating private and public desires, is especially recommended for protection of non-tax-exempt Urban Wilds sites.

LAND USE REGULATIONS — Boston Urban Wilds sites can be partially protected by available land-use regulations. Such partial protection should always be supplemented by other methods to insure long-term protection of an Urban Wilds site.

The Wetlands Protection Act *(G.L. Ch. 131, Sec. 40, as amended)* regulates the filling, dredging or altering of inland and coastal wetlands, riverbanks, ocean shorelines, beaches, tidal flats and salt meadows. Under the statute any developer or governmental agency wishing to alter any such area in Boston must first receive approval from the Boston Conservation Commission.

Floodplain zoning, if adopted by the City of Boston, will be applicable to areas subject to tidal action or to flooding. Farming, conservation and outdoor recreation will be the only land uses permitted as of right in a "Flood Hazard District." Exceptions from the floodplain zoning regulation may be granted, but only in certain instances.

Planned Development Area (PDA) Regulations. In the City of Boston the provisions of PDA zoning may offer protection to some of the most outstanding natural features of a site about to be built upon or otherwise developed. In Boston, the PDA may permit cluster building at high specific densities in return for a variety of trade-offs.

It is initiated by request of the developer, and requires a series of development and design declarations and review steps, including a mandatory series of three separate publicly advertised public hearings.

Any site in Boston designated for this procedure must be not less than one acre in size.

The effectiveness of such regulations for conservation purposes depends on the size and form of the site, the extent of natural areas to be preserved, the building floor area ratio of prescribed density in the underlying zoning district, and the City's ability to enforce the resulting regulation.

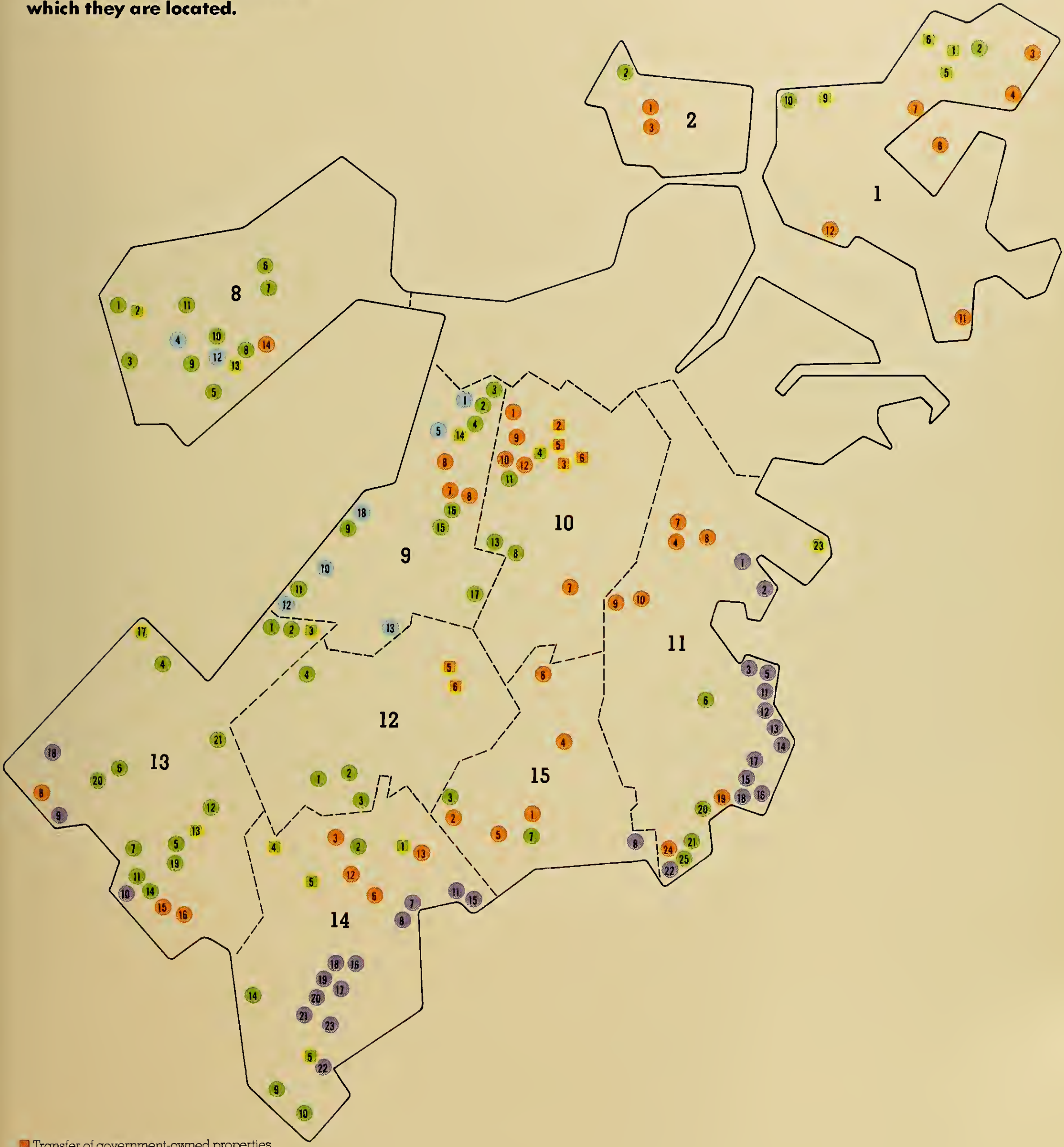
EMINENT DOMAIN—If no other or lesser means are available, an Urban Wilds site or any natural area can, of course, be taken by the City of Boston from any landowner by vote of the City Council under its power of eminent domain, for any of the stated public purposes. Occasionally, in the past, the City of Boston has taken land by eminent domain for conservation purposes, where the title to the acquired land was in doubt or where the purchase price exceeded the assessed value by 25 percent or more.

NATURAL AREA ZONING—The City should study the applicability in Boston of new "Special Natural Area" zoning similar to that adopted in New York City in 1975, which applies to any area which contains significant geologic, topographic, aquatic and other natural features worth preserving. In Boston, the Urban Wilds sites and other natural features could be protected by specific regulations within a Special Natural Area District. Every proposal for building development on any parcel within such a District would require review by the City's planning agency or by the Conservation Commission or both prior to issuance of any permit to build. Such permit would be issued only if the City determined that the proposed development would not adversely affect the natural features involved. This kind of additional zoning regulation, if adopted in Boston, could be an especially suitable means for protecting natural features until more permanent measures were arranged.

RECOMMENDATIONS FOR ACTION

- The City, through the Boston Conservation Commission, should acquire Urban Wilds sites designated "Most Significant Natural Areas" that are located in neighborhoods of high open-space need. Three sites are threatened by development and these should be acquired immediately.
- The Boston Redevelopment Authority and the Boston Zoning Commission should recommend "Planned Development Area" designations for 17 Urban Wilds sites about to be developed. Once a site has been designated as a PDA, the Boston Conservation Commission should take part with the BRA in the Design Review Process in order to (a) evaluate the impact that the proposed development would have on the natural features of the site and (b) negotiate conservation restrictions for protection of the site's most valuable natural features.
- The City, through the Public Facilities Commission, should transfer from the Real Property Department to the Boston Conservation Commission all tax-foreclosed properties designated Urban Wilds sites.
- The Boston Redevelopment Authority should transfer to the Boston Conservation Commission six Urban Wilds sites located in Charlestown and Roxbury.
- The City should transfer from the Department of Health and Hospitals to the Boston Conservation Commission the four-acre natural area which is part of the Mattapan Chronic Disease Hospital.
- The Urban Wilds sites controlled by the Massachusetts Port Authority should be transferred to the Metropolitan District Commission.
- Gifts of land should be encouraged from other government, institutional and private landowners.
- The City, through the Boston Conservation Commission and the Boston Redevelopment Authority, should negotiate with the Metropolitan District Commission for complete acquisition of 30 Urban Wilds sites designated along the Neponset River and Charles River and corresponding acquisition programs for Dorchester Bay and Mother Brook. Funds have already been allocated for the Neponset River site acquisition.
- Wherever possible, the Boston Conservation Commission should attempt to negotiate conservation restrictions, leaseholds or other less-than-fee agreements in perpetuity on all privately owned natural areas in Boston. Such areas comprise 50 percent of all Urban Wilds sites. Where a meaningful conservation restriction is not available, City acquisition by fee purchase should be studied.

First priority consideration should be given to sites currently threatened by urban development, regardless of their significance ranking or the neighborhoods in which they are located.

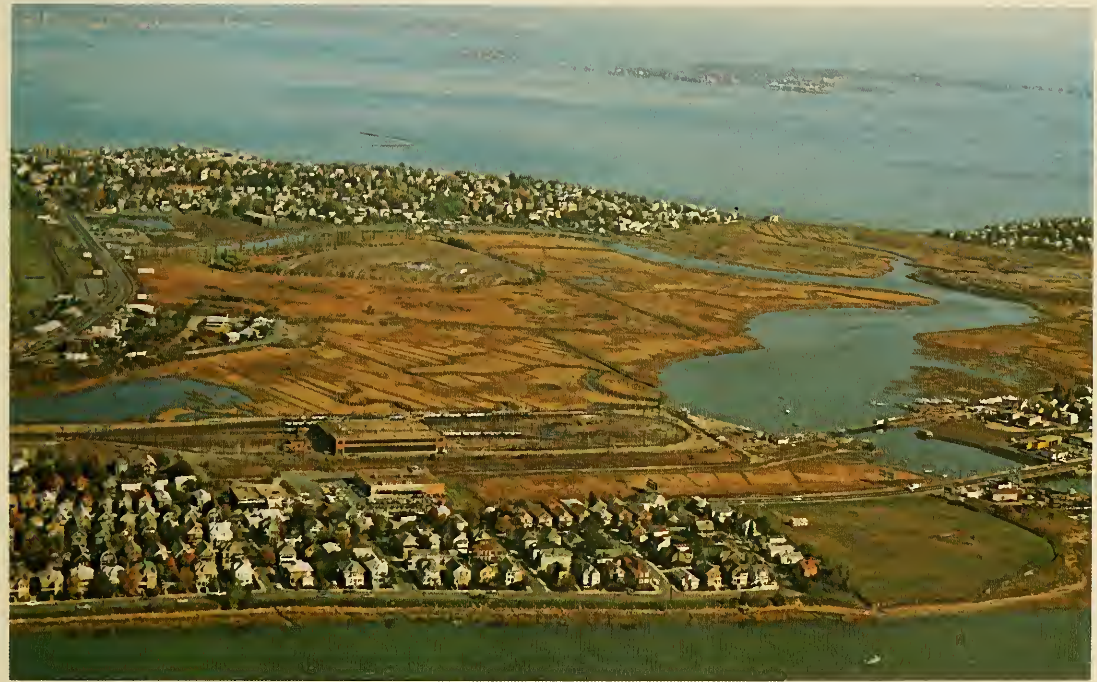


🟧 Transfer of government-owned properties
🟦 City acquisition
🟪 M.D.C. acquisition
🟩 Conservation restrictions
🟨 Planned Development Area designation

In this study, various preservation strategies are proposed. Some of these are about to be implemented, while others must be addressed in the near future. However, because of the urgency of protecting these sites, and because some sites have, by their ownership status, lent themselves to more immediate action, the City of Boston has already begun several significant protection programs. The two programs described below address the reality of fiscal austerity in which funds for open space acquisition are scarce, and illustrate the benefit of coordination and cooperation in achieving natural area protection.

Case History No. 1—Prior to the development of Logan Airport, Wood Island Park was the pride of East Boston. Designed by Frederick Law Olmsted on a 63-acre peninsula of land, the park incorporated many natural features: a mix of sandy beach, tidal flats, saltwater marshes, pastoral meadows and a hill covered with windswept vegetation. From the open water of the Inner Harbor and from its islands as well, hundreds of acres of saltwater marsh grasses and tidal flats could be seen. In the course of the expansion of Logan Airport, however, these and other open space and recreation areas in East Boston were taken for airport-related uses. The neighborhood is densely developed and has so far been unable to replace these lost open spaces.

In 1966, the Massachusetts Port Authority acquired by eminent domain approximately 123 acres of salt marsh and tidal flats adjacent to Belle Isle Inlet in East Boston. The property was not to be actively used, but was thought to be necessary to protect aerial approaches to runways and to adhere to Federal runway "clear zone" requirements. At the same time, Massport also acquired natural areas along the waterfront. Seeing in these now unused areas the potential for new open space for the community, the East Boston Recreation, Master Planning, Land Use Advisory Council, the Boston Conservation Commission, the Boston Redevelopment Authority and the Mayor's Office have worked with Massport to transfer title of all non-airport related natural areas to the Metropolitan District Commission for conservation and recreation purposes. These natural areas, which comprise the largest remaining salt marshes and open spaces in Boston, will form a 300-acre natural area reservation and recreation area, and



Aerial view of Belle Isle Marsh, Belle Isle Inlet and Bayswater Road, East Boston will allow the residents of East Boston once again to boast of having a major park by the harbor. Moreover, the City will not have to pay any capital funds for this parkland.

Case History No. 2 — An analysis of the ownership of the 143 Boston Urban Wilds natural areas showed that 25 of these properties were owned by the City of Boston's Real Property Department, which had received title to them through tax delinquency and foreclosure. Evaluation of the properties indicated that they were not suitable for development and, therefore, would probably not be sold through Real Property's usual auction procedure.

Each of the natural areas owned by Real Property has its own special characteristics: for example, one site borders Sprague Pond and would provide the only means of access to this scenic water body; another in Hyde Park is a rocky hill rising 50 feet clear above its surroundings from which spectacular views can be had of Bellevue Hill and Stony Brook Reservation; on a third site in Roxbury, Oak, Birch and Hemlock trees and moss and lichens grow on a geologically significant Puddingstone cliff and plateau.

Since each property is an irreplaceable natural area, it was proposed that instead of auctioning these properties, the Real Property Department should transfer them into the care, custody, control and management of the Boston Conservation Commission in perpetuity for conservation and recreation purposes. Such transfer would establish natural conservation areas in various neighborhoods throughout the City without cost or capital outlay by the City.

The Real Property Department has agreed to transfer these properties; the Boston Conservation Commission will manage them and the Public Facilities Department will process and facilitate each transfer.

These examples illustrate natural area preservation by the City. Protection, regulation and future use of natural areas will require joint action by public agencies, private owners, institutions and neighborhood groups.

Protection regulation and future use of natural areas will require joint action by public agencies, private owners, institutions and neighborhood groups.

Dana Road, West Roxbury

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